T Komuro; T Ota
Shonan Kamakura General Hospital, Department of Anesthesiology and Critical Care Medicine, Kamakura, Kanagawa, Japan

Introduction:
Acute kidney injury (AKI) is the predictor of poor prognosis for the patient with sepsis and septic shock. Several diagnostic criteria for AKI is used on clinical settings, but useful biomarker is not known yet. Urinary liver-type fatty acid-binding protein (L-FABP) is associated with kidney function and AKI[1], But that is not still discussed about AKI secondary to sepsis. Thus, we conducted the study of the association between urine L-FABP and AKI with secondary to sepsis.

Methods:
From May 2017 to October 2017, We collected adult sepsis patients admitted to our Intensive Care Unit (ICU). Patients were diagnosed with sepsis-3 definition[2]. Kidney Disease Improving Global Outcomes (KDIGO) criteria was used for diagnosis of AKI. L-FABP was measured when patient admitted to our ICU. Sensitivity and Specificity of L-FABP for diagnosis of AKI was assessed by AUROC curve.

Results:
Ninety-five patients participated in this study. Systemic Organ Failure Assessment (SOFA) score was 7 (median, IQR:5-10). Fifty-seven (60%) patients were diagnosed with AKI by KDIGO criteria. Serum creatinine level of AKI patients was 1.65mg/dl (median, IQR:1.40-2.53). Urine L-FABP level of AKI patient was 109.23μg/g Cr (median, IQR:27.58-671.33). Urine output was 1147.5ml (median, IQR:725.25-1747.5). The estimated sensitivity of urinary L-FABP level for diagnosing AKI was 81.1% and specificity was 53.4%. AUROC was 0.705 (95%CI:0.6-0.811). The cut-off line of L-FABP was 95.71μg/g Cr.

Conclusion:
L-FABP can be the novel biomarker for diagnosis of AKI. Further investigation need for diagnostic value of L-FABP and usefulness of early intervention for AKI used by L-FABP.

References:
Figure 1. The AUROC curve of L-FABP for diagnosis of AKI.